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H02P 9/08(21)Application number : **11-133003**(71)Applicant : **CAPSTONE TURBINE CORP**(22)Date of filing : **13.05.1999**(72)Inventor : **MARK G GILBRETH
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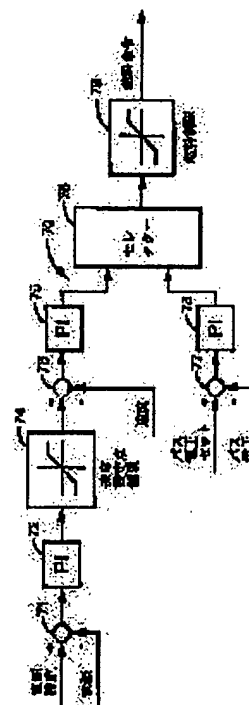
(30)Priority

Priority number : **98 80892** Priority date : **18.05.1998** Priority country : **US****(54) METHOD AND EQUIPMENT FOR CONTROLLING PERMANENT MAGNET
TURBINE GENERATOR/MOTOR**

(57)Abstract:

PROBLEM TO BE SOLVED: To find maximum efficiency for a gas turbine engine by keeping the temperature of exhaust gas of a gas turbine constant with such stability that can be obtained by changing the sampling time of different proportional- plus-integral controllers in a control loop of the gas turbine.

SOLUTION: A control system can be stabilized by the timing of serially connected proportional/integral controllers. The temperature of exhaust gas is associated with the fuel control for a gas turbine. Therefore, in order to keep the set value for exhaust gas temperature constant, response should be made in the appropriate time frame. In a loop timing of a power proportional/ integral controller 72, control depends on the response time of a speed and exhaust gas temperature controller 75. Therefore, these parameter should be stabilized before the power proportional/integral controller 72 receives a next feedback signal. The gas turbine control system can be stabilized by setting the sampling times of the different proportional/integral controllers to different ones.

**LEGAL STATUS**

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